



National Weather Service

Storm Data and Unusual Weather Phenomena



July 1997

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Character of Storm
					Killed	Injured	Property Crops	

CONNECTICUT, Northeast

Hartford County								
Granby	07	2132EST 2137EST			0	0		Hail(0.75)
Hartford County								
Suffield	07	2150EST			0	0		Hail(0.75)
Hartford County								
Bristol	09	1503EST			0	0		Hail(0.75)
Hartford County								
Unionville	09	1511EST			0	0		Hail(0.75)
Hartford County								
East Hartford	09	1530EST			0	0		Thunderstorm Wind (G52)
Hartford County								
Burlington	15	1600EST			0	0		Hail(0.75)
Hartford County								
Burlington	15	1600EST 1615EST			0	0	10K	Thunderstorm Wind (G80)
Tolland County								
Ellington	15	1624EST 1625EST			0	0	3K	Thunderstorm Wind (G50)

A severe thunderstorm moved across a part of Hartford and Tolland Counties. The storm produced a microburst in Burlington, in Hartford County, downing numerous trees in a three-mile wide area, some up to 6 to 18 inches in diameter. One tree fell on a parked auto with several people trapped inside. There was a report of cars being blown a couple of feet. Dime size hail fell in Burlington. Wind speeds are approximated to have been in the 90 mph range. In Tolland County, trees were reported blown down in Ellington.

MASSACHUSETTS, Central and East

Franklin County								
Heath to Colrain	03	1658EST 1704EST	4.5	100	0	0	50K	Tornado (F1)
Hampden County								
Blandford	03	1730EST			0	0		Thunderstorm Wind (G50)
Franklin County								
Charlemont to Colrain	03	1758EST 1807EST	8.5	100	0	0	50K	Tornado (F1)

A tornado touched down in the eastern part of Charlemont and travelled east causing damage to a campground. Fifteen trailers were damaged from falling trees and flying debris. Two of the trailers were severely damaged and one was destroyed with seven trees falling on top of it. Eyewitnesses reported rotation in the clouds and debris. The tornado then moved through the higher terrain of the Catamount State Forest. The path was discontinuous and ranged in width from 50 to 100 yards. The tornado path ended in the Copeland Hills section of Colrain. There were no direct injuries reported.



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MASSACHUSETTS, Central and East

Franklin County									
Montague	03	1800EST			0	0			Thunderstorm Wind (G50)
Hampshire County									
Ware	03	1835EST			0	0			Thunderstorm Wind (G50)
Franklin County									
Shutesbury	03	1845EST			0	0			Thunderstorm Wind (G50)
Worcester County									
Hardwick	03	1845EST 1900EST			0	0			Thunderstorm Wind (G50)
Middlesex County									
Littleton	03	2035EST			0	0			Hail(0.75)
Bristol County									
Acushnet	03	2125EST			0	0			Hail(0.75)
Bristol County									
Acushnet	03	2140EST			0	0			Hail(0.88)
Plymouth County									
Rochester	03	2200EST			0	0			Hail(1.75)
Barnstable County									
Sandwich	03	2225EST			0	0			Hail(0.75)

A line of severe thunderstorms swept across the state producing tornadoes and strong thunderstorm winds in the western part of the state and several reports of strong thunderstorm winds in Worcester County in central Massachusetts. As the line of storms moved east and southeast, there were many reports of large hail. Dime size hail was reported in Littleton in Middlesex County as well as in several communities in Bristol County. There even was a report of golf ball size hail from Rochester in the southern part of Plymouth County. There was dime size hail from Sandwich on the western part of Cape Cod. Lightning strikes started several small fires which resulted in only minor damage. Scattered power outages were reported.

Hampshire County									
South Hadley	07	1126EST 1140EST			0	0			Hail(0.75)
Worcester County									
Northbridge	07	1340EST			0	0			Hail(0.75)
Worcester County									
Upton	07	1343EST			0	0			Hail(0.88)
Norfolk County									
Norfolk	07	1353EST			0	0			Hail(0.75)
Worcester County									
Northbridge	07	1358EST			0	0			Hail(0.75)
Norfolk County									
Walpole	07	1410EST			0	0			Hail(0.75)

A line of thunderstorms moved across the state beginning in the early afternoon in Hampshire County and then moving eastward through Worcester County to the eastern part of the state by mid-afternoon. The storms produced mostly dime size hail at scattered locations. Gusty winds estimated up to 50 mph accompanied some of the storms. Boston's Logan International Airport recorded a peak gust to 40 mph at 3:36 PM. A lot of pea size hail was reported in North Plymouth, in Plymouth County.

Hampden County									
Tolland	07	1930EST			0	0			Hail(0.75)



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					Killed	Injured	Property	Crops	
<u>MASSACHUSETTS, Central and East</u>									
Hampden County									
Westfield	07	2005EST			0	0			Hail(1.75)
Hampden County									
West Springfield	07	2007EST			0	0			Hail(0.75)
Thunderstorms reached severe intensity in Hampden County in western Massachusetts during the mid-evening hours. Dime size hail fell in Tolland and West Springfield while golf ball size hail was reported in Westfield. There were no reports of damage									
Hampden County									
Blandford	09	1350EST			0	0			Hail(0.75)
Hampden County									
Chester	09	1358EST			0	0			Thunderstorm Wind (G50)
Hampshire County									
Huntington	09	1400EST			0	0			Hail(0.75)
Hampshire County									
Northampton	09	1425EST			0	0			Thunderstorm Wind (G50)
Franklin County									
Leverett	09	1430EST			0	0			Thunderstorm Wind (G50)
Hampden County									
Tolland to Granville	09	1430EST 1444EST			0	0			Thunderstorm Wind (G50)
Also affected Blandford.									
Hampshire County									
Hadley to Amherst	09	1440EST			0	0			Thunderstorm Wind (G50)
Hampden County									
West Springfield to Agawam	09	1508EST 1512EST			0	0			Hail(0.88)
Middlesex County									
Pepperell	09	1512EST			0	0	1K		Thunderstorm Wind (G50)
Hampden County									
Longmeadow	09	1513EST			0	0			Hail(0.75)
Hampshire County									
Hatfield	09	1515EST			0	0			Thunderstorm Wind (G50)
Worcester County									
Templeton	09	1525EST			0	0			Thunderstorm Wind (G50)
Franklin County									
Leverett	09	1530EST			0	0			Thunderstorm Wind (G50)
Worcester County									
Holden to Worcester	09	1530EST 1545EST			0	1	4K		Thunderstorm Wind (G70)
Worcester County									
Lunenburg	09	1543EST			0	0			Hail(0.75)
Middlesex County									
Groton	09	1600EST			0	0			Hail(0.75)

A warm, moist airmass ahead of an approaching cold front produced a line of thunderstorms, many severe, which marched across the state from west to east. The line reached the Connecticut Valley, affecting towns in Hampden, Hampshire, and Franklin Counties starting just before 3 PM. A microburst occurred in Worcester later during the afternoon. In Hampden County, spotters reported dime size hail in Blandford and Longmeadow. Trees were reported blown down in Granville and Tolland where about 4,000 electric customers lost power. State police reported trees blown down in Chester. Nickel size hail fell in West Springfield and Agawam. In Hampshire County, dime size hail was reported in Huntington and trees and power lines were knocked down in Northampton. One tree fell on a house. Numerous trees were blown down in Amherst and road signs were reported down in Hadley



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MASSACHUSETTS, Central and East

at the intersection of Routes 9 and 47.

In Worcester County, wind damage was reported in Templeton, including downed power lines. Also, in Worcester County, two microbursts occurred within 15 minutes of each other. The first one struck in Holden at the Holden Reservoir and uprooted one tree and destroyed four others at 4:30 PM. At 4:45 PM, two miles farther east, another microburst hit at Indian Lake in Worcester. A National Weather Service investigation determined that a microburst occurred along the north shore of Indian Lake. Peak wind speeds were estimated up to 70 mph. There was an estimated \$3,000 to \$4,000 damage to boats at the lake. On land, one boat, about 12 to 14 feet long, was blown approximately 26 feet and the roof was ripped off a storage shed. A woman suffered a mild concussion when she was struck by a wind surfing sail. Timely warnings by the National Weather Service allowed up to 100 people to be cleared from the lake before the storm struck.

In Middlesex County, in Pepperell, there was wind damage including trees and power lines blown down. Dime size hail fell in Lunenburg and Groton.

Hampshire County									
Northampton to Hatfield	17	1850EST 1902EST			0	0			Thunderstorm Wind (G52)
Franklin County									
Northfield	17	1855EST			0	0			Thunderstorm Wind (G50)
Franklin County									
Orange	17	1855EST			0	0	3K		Lightning
Franklin County									
Orange	17	1855EST			0	0			Thunderstorm Wind (G50)
Worcester County									
Hardwick to West Brookfield	17	1921EST 1923EST			0	0			Thunderstorm Wind (G50)
Worcester County									
Athol to Barre	17	1925EST 1935EST			0	0			Thunderstorm Wind (G50)

Also affected Phillipston.

Severe thunderstorms during the evening caused scattered wind damage in parts of Franklin and Hampshire Counties...then farther to the east into Worcester County. Trees were reported blown down in Northfield and Orange. A chicken coop was struck by lightning and caught fire in Orange. Also in Orange, lightning struck the police station, resulting in damage to computers and other equipment. Several trees were downed in Hatfield and Northampton, where wind gusts were reported up to 60 mph along with pea size hail. Tree branches were downed in Amherst. In Worcester County, trees were blown down in Hardwick, West Brookfield, Athol, Barre, and Phillipston.

Bristol County									
Taunton to Raynham	18	2030EST			0	0			Thunderstorm Wind (G50)
Plymouth County									
Middleboro	18	2040EST			0	0			Thunderstorm Wind (G50)
Plymouth County									
Halifax to Plympton	18	2045EST			0	1	10K		Lightning
Barnstable County									
Wellfleet	18	2140EST			0	0			Hail(1.75)
Barnstable County									
Harwich	18	2150EST			0	0			Hail(0.75)

Thunderstorms developed over Bristol County during the evening hours and moved eastward across Plymouth County and then across Cape Cod Bay and onto Cape Cod (Barnstable County). These storms became severe at several locations, producing damaging winds in Taunton and Middleboro and large hail on outer Cape Cod. Power lines were reported down in the Taunton-Raynham area. Tree limbs up to 4 to 8 inches in diameter were reported blown down in Middleboro per the local police department.



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MASSACHUSETTS, Central and East

One person was slightly injured when a lightning strike travelled through a house in Halifax, where two houses were struck by lightning. Damage was minimal. In neighboring Plympton, a house was set afire by a lightning strike. After the storms moved eastward across Cape Cod Bay, they produced large hail on the outer Cape. Golfball size hail was reported in Wellfleet and dime size hail was reported by a SKYWARN spotter in Harwich.

MAZ016

Eastern Norfolk

22 1328EST

0 0

Dust Devil

A clear air funnel or dust devil moved directly over the meteorological tower at the Blue Hill Observatory in Milton, MA, with a peak wind gust to 39 mph.

MAZ019>022

Eastern Plymouth - Southern Bristol - Southern Plymouth - Barnstable

**25 1000EST
1900EST**

0 0

Strong Wind

MAZ022>024

Barnstable - Dukes - Nantucket

**25 1000EST
1900EST**

0 0

Heavy Rain

MAZ023>024

Dukes - Nantucket

**25 1000EST
1900EST**

0 0

High Wind (G61)

Tropical Storm Danny, which had been racing to the east-northeast over the Atlantic Ocean south of New England, suddenly turned northward toward southeastern Massachusetts when an upper level low pressure system formed in the New York City area during the early morning hours. The center passed approximately 15 miles southeast of Nantucket Island late in the afternoon.

Tropical storm conditions with high winds and heavy rain occurred over Cape Cod, Martha's Vineyard, and Nantucket with only marginal tropical storm conditions occurring along the remainder of south coastal Massachusetts. Wind gusts as high as 70 mph from the northeast were reported, mostly on east and north facing beaches on Martha's Vineyard and Nantucket Islands. Wind gusts to 30 to 50 mph occurred along coastal Plymouth County and over the Cape. There were sporadic power outages as small to medium tree limbs were blown down.

Five tents were blown down at a camp in Plymouth and another damaged. There was some minor damage to boats and several harbors during the afternoon as high tide approached. Several boats broke loose from their slips and moorings on Martha's Vineyard. Tides ran 1 to 2 feet above normal. Coastal flooding was minimal, with just some washover of waves onto immediate coastal roads. Minor to moderate beach erosion was reported on Nantucket Island and minor beach erosion on Martha's Vineyard.

A weather spotter on Nantucket Island recorded 4.52 inches of rain. More than 3 inches fell on Martha's Vineyard, and 3.25 inches was reported from Wareham. Over most of the Cape, 2.5 to 3.5 inches of rain fell. The lowest pressure on land was 999.5 millibars, or 29.52 inches, at Nantucket at 3:53 PM. Tropical Storm Danny was only the fifth tropical cyclone this century to impact southern New England during the month of July.

NEW HAMPSHIRE, Southern

Cheshire County

Walpole

03 1745EST

0 0

Thunderstorm Wind (G50)

Cheshire County

Hinsdale

03 1750EST

0 0

Thunderstorm Wind (G70)



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NEW HAMPSHIRE, Southern

Cheshire County Swanzy	03	1813EST 1818EST	2	100	0	1	500K	Tornado (F1)
Cheshire County Marlow	03	1815EST			0	0		Thunderstorm Wind (G50)
Cheshire County Marlborough	03	1825EST			0	0		Thunderstorm Wind (G70)
Cheshire County Dublin	03	1830EST			0	0		Thunderstorm Wind (G70)
Hillsborough County Greenfield	03	1855EST 1900EST	2	250	0	0	250K	Tornado (F2)

Very severe thunderstorms moved through Cheshire and Hillsborough Counties, producing two tornadoes, microbursts, damaging thunderstorm winds, and large hail.

It appears that a microburst hit Hinsdale and both a microburst and weak tornado affected the town of Swanzy, just south of Keene, in Cheshire County. A horse barn was destroyed and an ice arena damaged at the Cheshire Fairgrounds. Pieces of aluminum were wrapped around street lamps and two-by-fours were driven into the metal sides and roof of the ice arena. One person was slightly injured by flying glass fragments when her car windows were blown in. Many trees were uprooted or blown down. Damage was estimated at approximately \$500,000 at the Fairgrounds. There was evidence of both straight-line wind damage and some rotation associated with this storm.

In Hillsborough County, a tornado touched down in the western portion of the town of Greenfield just to the west of Otter Lake. It then moved to the northeast, damaging a sawmill, destroying a recycling facility, and damaging some buildings at a campground. Wood and aluminum buildings were torn apart or blown over. Many large trees were broken off near their bases and hundreds more had their tops broken off. There were no injuries reported.

Trees were reported blown down in Marlborough and a microburst may have occurred in nearby Dublin, where numerous trees and tree limbs were blown down along the shore of the Howe Reservoir.

All of the aforementioned damage was along a path cut by the same thunderstorm complex.

However, trees also were reported blown down in the towns of Walpole and Marlow in northern Cheshire County from a separate cluster of thunderstorms.

About 1,700 electric customers in the Monadnock Region lost power during the storms. Most of the outages occurred in the towns of Marlborough, Marlow, Richmond, Swanzy, and Winchester. Another 100 lost power in Walpole. Statewide, about 10,000 electric customers lost power.

Cheshire County Richmond	07	1330EST			0	1		Lightning
Cheshire County Rindge	07	1330EST			0	0		Hail(0.75)
Cheshire County Winchester	07	1415EST			0	0		Hail(1.00)

Thunderstorms produced dime size hail in Rindge and quarter size hail in Winchester in Cheshire County. In Richmond, a bolt of lightning struck a television satellite dish and entered the basement of a home, slightly injuring a man who was in contact with a steel frame. He received an electrical shock and the jolt threw him across the room. He was treated and released at the local medical



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NEW HAMPSHIRE, Southern

center.

Cheshire County

Fitzwilliam	09	1447EST			0	0			Hail(0.75)
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Hillsborough County

Milford to Nashua	09	2000EST 2030EST			0	0			Lightning
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Approximately 14,000 electric customers lost power in southern New Hampshire, mostly due to lightning strikes, including a total of 2,200 in Nashua and 1,700 in Milford.

Hillsborough County

Nashua	14	1645EST 1745EST			0	0	2K		Urban/Sml Stream Fld
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A series of quick, heavy showers flooded streets, some cellars, and some basement floors in the city of Nashua's downtown area just before 6 PM. Storm drains and sewers just could not handle all of the runoff. A number of autos stalled out in the one to two feet of water in the streets. Extensive damage was reported in one building when sewers backed up.

RHODE ISLAND

RIZ004>007

Eastern Kent - Bristol - Washington - Newport

25	1200EST 1900EST			0	0				Gusty Winds
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Tropical Storm Danny, which had been racing east-northeastward over the Atlantic Ocean south of New England, suddenly turned northward toward southeastern Massachusetts in response to the development of an upper level low pressure system near New York City during the early morning hours. The center passed approximately 15 miles southeast of Nantucket Island late in the afternoon. The storm produced some wind gusts to tropical storm strength along the southeast Rhode Island coast, with gusts mainly in the range of 30 to 45 mph from the northeast. A gust to 50 mph was measured at Warwick at 6 PM and 41 mph was reported from Tiverton at 4:20 PM along with 0.8 inches of rain. There were no reports of damage.